DOCUMENT RESUME

ED 238 661 RC 016 440

AUTHOR Bradley, Doug

TITLE Revitalizing Rural America: A Cooperative Extension

System Response.

INSTITUTION SPONS AGENCY Wisconsin Univ., Madison, Univ. Extension. Extension Service (DOA), Washington, D.C.

PUB DATE Nov 86

NOTE 47p.; Prepared for the Extension Committee on

Organization and Policy.

PUB TYPE Reports - Research/Technical (143)

EDRS PRICE

MF01/PC02 Plus Postage.

DESCRIPTORS *Community Change; Community Development; Economic Climate; *Economic Development; Economic Factors;

Employment Opportunities; Entrepreneurship;

*Extension Education; *Program Development; Role of Education; Rural Areas; *Rural Development; Rural

Economics

IDENTIFIERS *Cooperative Extension Service; Economic

Revitalization; Farm Crisis; Income Improvement; International Busines; Leadership Effectiveness; Resource Management; *Revitalizing Rural America

Program

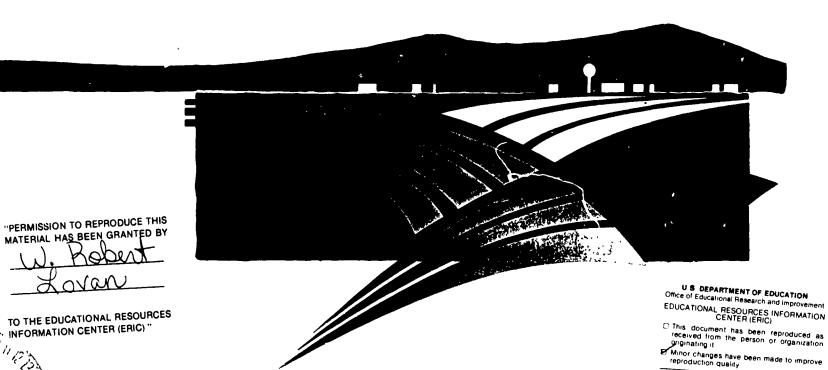
ABSTRACT

The survival of rural American farms and communities is dependent upon expansion of income and employment opportunities in rural areas. Recognizing the growing challenge for local leaders and the contribution that educational assistance can make, the Cooperative Extension System has identified Revitalizing Rural America as a priority program for FY 1988-91. This publication analyzes the current situation in rural America and proposes a response to assist in its revitalization. It considers a number of urgent realities generated by changes in the United States and world economies, population shifts, structural changes in agriculture and other natural resource industries, and adjustments in the industrial economy. Among these realities are that hard work and successful manipulation of natural resources do not quarantee economic success; control over local destiny has been diminished; rural areas are more dependent on volunteer leadership; service demands on local governments are growing as revenues diminish; and human/financial capital are flowing out of many rural areas. Coming to grips with these and other changes presents challenges including maintaining/enhancing competitiveness of farms and rural businesses; diversifying rural economic bases; finding alternative uses for rural resources; easing the transition for farm families and youth; providing technical/educational assistance to local governments; helping communities identify/implement policy options to increase jobs and income; and assisting with conservation/management of natural resources. (NEC)

Reproductions supplied by EDRS are the best that can be made



Revitalizing Rural



TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

A Cooperative Extension System Response

 Points of view or opinions stated in this docu ment do not necessarily represent official

OERI position or policy

Cooperative Extension System

The Cooperative Extension System provides information and educational programs to all people without regard to race, color, national origin, sex, or handicap.



Prepared for the Extension Committee on Organization

Foreword

The survival of rural America, both the farms and smaller communities, is dependent upon the expansion of income and employment opportunities in rural areas. Recognizing the growing challenge for local leaders and the contribution that educational assistance can make, the Cooperative Extension System has identified Revitalizing Rural America as a priority program effort for FY 88–91. This publication analyzes the current situation in rural America and proposes an Extension Service-USDA and Extension Committee on Organization and Policy (ECOP) response to assist in its revitalization.

Revitalizing rural America is not only in the best interest of the 63 million people who live there, but it is also in the best interest of the entire nation. We depend upon rural America for the production of food, fiber, and forest products as well as stewardship over the land and water resource base. Rural America is the source of much of our clean water, clear air, and other environmental amenities.

Thus far, the human side of the rural crisis has received the most attention. While this emphasis comes as no surprise, it is important to understand that it represents just the "tip of the iceberg" of the rural dilemma. The farm crisis is damaging rural America in immediate and potentially serious ways, creating an environment of economic hardship and personal stress that strain the ability of rural governments to provide essential community services and facilities.

This report marks an important step in addressing the issue of rural revitalization and high-lighting several challenges that, if met, can help to achieve that goal. But there is an additional challenge included here, one which is directed to all Americans—if we want to preserve and revitalize rural America we've got to be willing to do something about it. Now.

Myron D. Johnsrud Administrator ES-USDA Leo Lucas Chair, Extension Committee on Organization and Policy

ERIC

Contents

Summary, 3

Developing a Perspective on a Changed World, 5

Rural America in a Changed World, 12

Extension's Response to a Changed Rural Economy, 20

A Challenge to Americans, 26

Selected References, 28



Summary

Rural America is at a critical juncture. Staggering declines in farmland values and the instability of net farm income, coupled with increased agricultural competition, and the economic decline in other natural resource based industries such as mining, timber, and petroleum have brought the reality of the rural crisis home. When combined with the loss of manufacturing jobs endured by the rural sector during the recessions of the early 1980s, the overall effect is an almost daily drain on the resources and vitality of rural America.

But within the roots of this current crisis lie the seeds of rural revitalization. The moment is at hand for those concerned about rural America to ensure that it can and will play an important role in the 21st century.

Rural America is home to 63 million Americans and steward of nearly 90% of the country's natural resources. It includes the families living in the nation's 14,000 small towns and cities; the commercial farmer who has stabilized the family income with non-farm income sources; the people whose homes are clustered about highway intersections or strung along a county road; the individuals living in villages where fishing, mining, or timber are the major source of support; the part-time farmers who derive the major share of their income from off-farm work; and the people who have chosen the lifestyle advantages of living in the country.

Such diversity is a hallmark of rural America. Yet while some rural areas are thriving, rural Americans in general have lower incomes, fewer job opportunities, higher unemployment rates, and are more likely to be in poverty or to live in substandard housing relative to their metropolitan counterparts. And the problems have gotten worse.

Changes in the U.S. and world economies, population shifts, structural changes in agriculture and other natural resource industries, and severe adjustments in the industrial economy have caused economic hardship and personal stress in many parts of rural America. These, in turn, have generated a number of urgent realities, among them:

- hard work and the successful manipulation of natural resources do not guarantee economic success;
- control over local destiny has been diminished;
- rural ar ...s are more dependent on volunteer leadership;
- service demands on local governments are growing as revenues diminish;
- human and financial capital are flowing out of many rural areas.



7

Revitalizing Rural America

Coming to grips with these and other changes presents a number of challenges for all Americans, including:

- maintaining and enhancing the competitiveness of farms and rural businesses;
- diversifying the rural economic base;
- finding alternative uses for rural resources;
- easing the transition for farm families and youth;
- providing technical and educational assistance to local units of government;
- helping communities identify and implement policy options designed to increase iobs and income;
- assisting with the conservation and management of natural resources.

Not all rural farms, businesses, families, and communities are under economic stress. Nor can all that are experiencing stress survive the current restructuring. Many, however, have the potential for revitalization, an effort which will require the participation and collaboration of many different organizations and institutions. Such an undertaking will include state departments of development, regional and local economic development associations, chambers of commerce, businesses, commodity and trade associations, educational institutions, and individuals. Education is at the heart of this rural revitalization effort.

Within the educational arena there is an organization that has been working with rural Americans for over seventy years. Forged by the Smith-Lever Act of 1914, the Cooperative Extension System has made the enrichment and development of people's lives through education its ultimate goal. And as the institution which has legitimized change, Extension will provide the perspective, knowledge, skills, and help shape the decision-making environment necessary to create rural opportunities.

Operating at the local level and collaborating with state and local governments, businesses, individuals, and other research and educational institutions, the Cooperative Extension System is accepting the challenge created by a changed world and is ready to join with its other partners in a more integrated effort to help rural people take advantage of new opportunities.

A successful revitalization effort will require new resources. But by generating the same type of commitment and energy to revitalizing rural America as it did to increasing agricultural efficiency, the Cooperative Extension System can help rural America realize its potential. Not only ca. Extension provide the perspective and knowledge necessary to enable rural and non-rural residents to understand how the world has changed, but it can also help rural residents put that education to use in the process of revitalizing rural America, community by community



Developing a Perspective on a Changed World



A Wisconsin farmer from rural Marathon County raises ginseng for export to the Orient; an Oregon sawmill operator installs state-of-the-art equipment in order to ship lumber to Japan;

a Minnesota farmer experiments with white corn which he sells to a Chicago company that makes Mexican tortillas and tacos; and Louisiana officials lure two Italian tanneries to the Louisiana swamps to tan alligator hides.

What each of these examples has in common is a realistic perspective on a changed world. In the past decade, rural America has borne the brunt of the world economic crisis and seen the bulk of its traditional livelihood contract

and its share of world markets dry up. But rather than accept these trends as inevitable, many people in rural communities are fighting back.

Hibbing, Minnesota is fighting back. Tucked away in the Iron Range of remote northeastern Minnesota, Hibbing was reeling from the downturn in mining before it decided to shift away from making its living from a non-renewable natural resource (taconite) to a renewable one (timber). The residents of Hibbing also decided to seek out new markets for their new products, and their economic development efforts attracted the attention of an entrepreneur who built a \$5.3 million chopsticks plant which began production in May 1986. During the next five years, rural Hibbing will be sending six billion chopsticks to Japan!

Hartwell, Georgia is fighting back. A depressed community in the early 1980s, Hartwell is now a thriving tourist attraction, boasting a revitalized downtown and lake recreation. The collaborative efforts of local community leaders, Extension experts at the University of Georgia, and high school students have resulted in the use of an antique steam engine for train tours around the lake and the creation of the Depot Street Development Corporation which is redeveloping a two-block area next to the scenic railroad.

Bucklin, Missouri is fighting back. A small, north central Missouri community ravaged by the farm crisis, Bucklin saw its local bank close and fcreclosure threaten more than a hundred area farm families. Bucklin residents responded by working with University Extension staff to develop a community network to deliver programs that: provide information for families and

businesses to make better economic decisions; help individuals deal with the stress that accompanies the loss of their livelihood; create new services to meet the rural community's changing needs. Bucklin isn't out of the woods, but its residents are beginning to control their own destiny.

The experiences of rural communities like Hibbing and Hartwell and Bucklin reflect an awareness of some of the critical forces at work in a changed world. But many of the other 63 million residents of rural America have yet to come to grips with these changes, placing the future of rural America in jeopardy.

The farm crisis and the economic difficulties being experienced by other resource-based businesses are just two of the many challenges confronting rural Americans. By developing a different perspective on a world that is changed as well as changing, rural residents, as well as their non-rural counterparts, can help rural America to adapt and, in the long run, endure.



Critical forces at work in a changed world

A changed world economy

The Wisconsin ginseng farmer and the Hibbing chopsticks factory are indicative of a changed world econor by. In a recent edition of Foreign Affairs, Peter Drucker summarized the essence of how the world has changed:

The primary goods economy has become "uncoupled" from the industrial economy.

The collapse of raw material and agricultural commodity prices which began in 1977 has had little impact on the world industrial economy. Moreover, the depressed state of the primary goods economy has not led to a depression in the industrial economy. Finally, production of forest products, metals, minerals, and agricultural products continues to increase despite the lower prices. The major contributors to this change are the increased production of food in most industrial and developing countries (outstripping demand and population growth), and the decline in the amounts of raw materials now used in finished products.

Production has come "uncoupled" from employment in the industrial economy. In all industrial countries, manufacturing production has risen steadily and maintained its share of the total economy while at the same time employing fewer people. Countries that attempt to preserve blue-collar manufacturing jobs at the expense of international competitiveness appear to be laying the foundation for increased unemployment. The causes of this deindustrialization of the work

force are found in the accelerated substitution of knowledge and capital for manual labor and in the movement away from labor-intensive industries to knowledge-intensive industries.

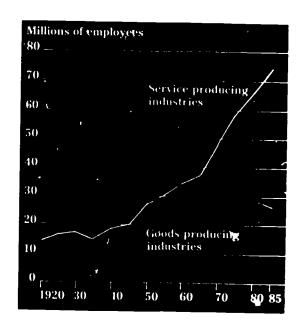
Capital movements rather than trade (in both goods and services) have become the driving force of the world economy. While world trade in goods and services is larger than ever before, capital movements, exchange transactions, and credit flows are now worth several times the value of world trade transactions. Any business currently exposed to the world economy must function as two businesses—a maker of goods (or a supplier of services) and a financial business.

Thus, business and community economic planning must be made with an understanding of continual and fundamental changes in the fabric of the world economy. Local economic planning such as that in Hibbing will be more successful if it strengthens the international competitive position of businesses in rural communities.

A changed U.S. employment and personal income picture

The reduction in the relative importance of goods-producing industries (agriculture, mining, construction, and manufacturing) as a source of employment exerts a critical influence upon both rural and non-rural economies. For example, in 1920 more than two-thirds of U.S. workers, a large number of whom were farm owner-operators or hired labor, were involved in the production of goods. But in the 1980s, well over two-thirds of the workers and self-employed are now engaged in service-producing industries (transportation, public utilities, health care, tourism, business services, government, finance, communications, insurance, and real estate) while the

Chart 1. Distribution of U.S. employment, 1920–1985*



*Employees on agricultural and nonagricultural payrolls Sources National Commission on Employment Policy, 1982, and the U.S. Department of Labor, 1986.



Chart 2. Sources of personal income in the U.S., 1963 and 1984



Source: Survey of Current Business. August 1979 and 1985

percentage of the work force needed to meet the country's needs for goods production has declined.

Specifically, since the 1920s the absolute number of workers employed in the goods-producing sector has remained relatively constant at about 25 to 30 million. During the same period the number of jobs in service-producing industries has grown from 14 million to over 70 million (see chart 1). Both the relocation of labor-intensive manufacturing to developing countries and the adaptation of labor-saving technology to enhance international competitiveness will continue to limit the employment-generating potential of goods-producing industries.

The major changes in the nation's employment have been accompanied by significant shifts in personal income. The percentage of personal income generated from employment in the goods-producing sector has declined, while that of the service sector has been relatively steady. In 1984, about one in four dollars of personal income came directly from goods-producing industries; nearly half the dollars came from the service-producing sector (see chart 2).

Less well recognized is the large share of personal income controlled by retired people. Nearly one out of three dollars of personal income is passive income (includes transfer payments, dividends, interest, and rent), and a large portion of it is controlled by the elderly. In 1984, for example, 14% of personal income came from transfer payments, most of which are social security, medicare, and government pensions. Another 18% came from dividends, interest, and rent—property income that goes in large measure to the elderly.

Community economic development efforts must take into account the importance of service-producing industries and the significance of the shifts in personal income, especially that controll 1 by the elderly.

Anierica's changing demography

Graying cf America The U.S. is currently one of the oldest countries in the world and it is growing older. By 1990, 15% of the entire population will be over 65 years of age; by the year 2030, 25% will be over 65. Once perceived as an economic drag on the community, the elderly are now seen as an important source of income not only because of their control of large amounts of passive income (see above) but also because they spend their income locally and on items with a high labor content—boosting local retail sales, service revenues, and bank deposits Further, the elderly represent a major human capital resource, possessing an abundance of wisdom. job experience, and leadership that can benefit all American communities.



Migration trends Many rural analysts predict that rural communities will be plagued by slow population growth and high joblessness for years to come. Already, the growth in .ural population witnessed during the 1970s has slowed considerably as population in many rural areas grows slower than population in metropolitan areas (see chart 3). According to one rural advocacy group, ominous economic trends lie behind the drop in the rate of population growth—91% of the nation's counties with an unemployment rate double the national average are located in rural areas.

New family structures No longer is the American family typified by the two parent-a father who works and a mother who stays home -- wo children equation. Family diversity is now the norm. Last year, 61% of all women with children under 18 years of age worked outside the home, while the number of single parent families has increased from 7% (1950) to over 24% (1985). Research indicates that single parenting leads to an increase in poverty for children-over 55% of U.S. female-headed households are poor. These and other changes in the family, including the increase in the number of rural intergenerational families who are living together primarily because of economic distress, compound the overall family stress kindled by conflicting values and changing lifestyles. These new family arrangements require new and different kinds of services and community responses.

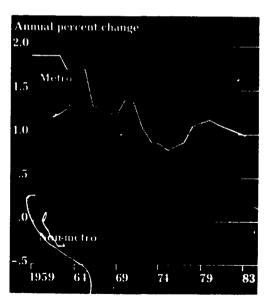
Technology

Technology is the watchword of the 1980s. Its rapid advances affect all aspects of our lives, strain our capacity to assimilate and adapt, and change the way we view the world. Perhaps most striking is the fact that today's technology is not location specific—it is adaptable virtually anywhere a telephone and a computer exist!

The impact of technology is felt in all fields, agriculture being but one example. The U.S. Office of Technology Assessment recently identified 150 emerging technologies in agriculture, technologies that by the end of the century could: enable Texas cattle ranchers to raise larger cattle; allow Wisconsin dairy farmers to control the sex of their calves and to increase milk production by more than 10% without increasing feed intake; and increase farm management skills through the use of computer and electronics technology.

Another dimension of technology's importance is illustrated by the shift to knowledge-intensive industries. For example, the manufacturing costs of the semi-conductor chip are about 70% knowledge (research, development, and testing), and no more than 12% labor. The same can be said for prescription drugs whose knowledge content is almost 50% of cost. This declaning share of physical labor and raw materials in the total cost of knowledge-intensive industries is a direct result of technology and is a major factor explaining the "uncoupling" of the primary and industrial economies, as well as the "uncoupling" of manufacturing production and employment.

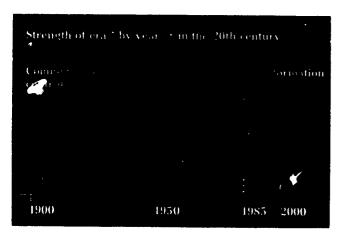
Chart 3. Population change in metro and non-metro areas in the U.S., 1959–1983



Source Bureau of Economic Analysis



Chart 4. Strength of three eras of social and economic change in the U.S.



Source: Don A. Dillman, "Social Issues Impacting Agriculture and Rural Areas As We Approach the 21st Century," Joint Economic Committee, Congress of the U.S., June 5, 1986

Changing nature of society

Some researchers view societal change within the context of three eras of significant social and technological change. Describing the periods as those of 1) community control: 1900–1940; 2) mass society: 1940–1980; and 3) information age: 1980-present (see chart 4), they contend that rural residents are at a disadvantage in adapting to the information age and face the possibility of lagging behind.

There are significant differences among the three eras. During the community control era, for example, people's lives were confined to the community in which they lived, one which had an overlapping institutional structure and exercised a powerful controlling force in their daily affairs. The nature of these communities forced people to lead consistent lives. Bringing about change meant overcoming some very powerful community norms.

During the mass society era, communities as arenas for action were opened to outside influence through better roads and telephone systems, greater travel and educational opportunities, major television and media exposure, and larger hierarchies. Homogeneity was the norm, and decisions were likely to be made outside the boundaries of the communities with little consideration given to the effects of those decisions on other community institutions.

Today, the information age provokes massive increases in people's abilities to organize, store, retrieve, and transmit information, and it is occurring at a much faster speed than either of the two previous eras. The pressure is greatest

on a rural infrastructure that seemingly does not possess the technologies (modernized telephone systems, two-way satellite communication, links with fiber optic networks, etc.) and skills to facilitate rural America's entry into the information age.

Changing locus of decision making

The authority and fiscal responsibility for many rural community functions is currently being pulled in opposite directions. On the one hand, the internationalization of markets, franchising of businesses, and deregulation of the banking system, transportation industry, and other institutions have removed the local control over many community decisions. On the other hand, the New Federalism is returning the authority and responsibility for local services to the communities without transferring the attendant resources. The net result is more than a sense of loss of control on the part of local leaders. Rather, it is the financial stress which results from trying to cope with the escalating demand for local services and the need to upgrade depreciating facilities in the face of declining local revenues and uncertain federal revenue sharing.



Agriculture's changed structure

The number of farms has declined by nearly two-thirds since 1935 (from 6.8 million in 1935 to 2.2 million in 1983) while the amount of land in farms has decreased by only 1%. Nearly two-thirds of our food and fiber is produced by one-third of our farms.

According to government figures, since 1970 the number of small and part-time farms (see Table 1 for sales classes of farms) has declined by 22% and 18% respectively while their market shares have been reduced from 9% to 6% (small) and from 43% to 22% (part-time). The market share of large and very large farms has increased from 36% to 54%. These commercial farmers garnered 84% of net farm income in 1982 (see Table 1).

As these trends continue, small and part-time farmers will continue to increase their dependence on off-farm sources of income (includes wages and salaries from off-farm employment, dividends, interest, rent from non-farm real estate, social security, and other pensions); moderate size farms (traditionally viewed as the backbone of American agriculture) will have a smaller share of the market and a declining share of net farm income; and the large and very large farms will increase their share of total cash receipts and net farm income. In the near future, almost all remaining farmers will need to secure substantial amounts of non-farm income in order to maintain their standard of living.

Given this evolving agricultural structure and the fact that off-farm income is currently both a larger and more stable source of income than net farm income, off-farm jobs become integral to the preservation of America's farms, farm families, and rural communities.

Table 1. Distribution of varms, percent of cash receipts, percent of farm income, and farm and off-farm income per farm by sales class, 1982

Sales Class	Value of farm products sold	Percent of all farms	Percent of total cash receipts	Percent of net farm income	Average net farm income	Average off-farm income	Average total income
	Less than \$5,000	36.4	1.2	-2.0	(\$550)	\$20,396	\$19,846
Small	\$5,000-\$9,999	12.6	1.5	-0.9	(700)	22,498	21,798
	\$10,000-\$19,999	11.6	2.8	-0.9	(780)	18,648	17,868
Part-time	\$20,000-\$39,999	11.1	5.4	0.2	154	14,134	14,288
	\$40,000-\$99,999	14.9	16.4	5.2	3,451	12,529	15.980
Moderate	\$100,000-\$199,999	8.1	19.1	14.6	17,810	11,428	29,238
Large	\$200,000-\$499,999	4.2	21.0	20.4	48.095	12.834	60,929
Very Large	\$500,000 and over	1.2	32.5	63.5	504,832	24,317	529,149
- -	All farms	100.0	100.0	100.0	\$9,976	\$17,601	\$27,578

Source: Adapted from "A Special Report for the 1985 Farm Bill," U.S. Office of Technology Assessment, March 1985.

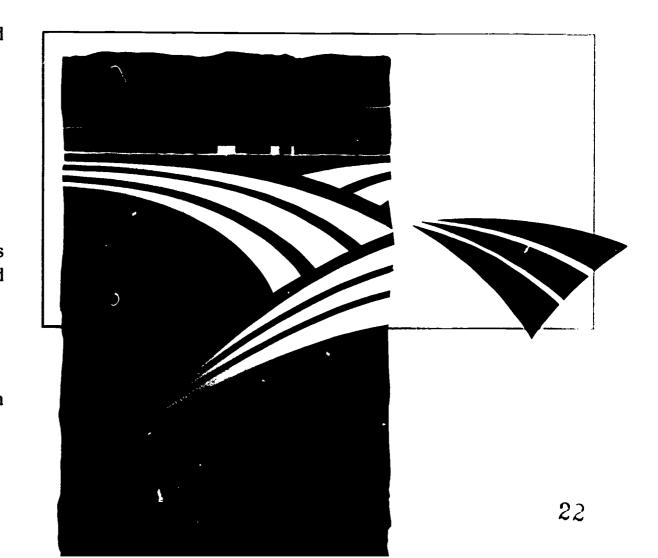


Rural America in a Changed World

How has a changed world changed rural America? In one rural community, southwest Minnesota's Fulda and its 1300 residents, the effects of the world marketplace, technology, and the farm crisis have spread beyond the farm fields and into local businesses, real estate, and services.

Since 1979, land values in Fulda's surrounding counties have declined by more than 50%, the population has declined, and property tax delinquencies are skyrocketing. The ramifications in Fulda?

- retail sales declined 55% between 1979 and 1985, falling from \$7.5 million to \$3.4 million;
- 6 businesses closed in 1985 alone, eliminating 21 jobs;





- a local bank failed;
- ■5 homes were foreclosed in 1985;
- city lots declined in market value from \$10,000 in 1979 to \$3,500 today;
- property tax delinquencies more than doubled between 1984 and 1985;
- city revenues declined 9% from 1982–84, and an \$80,000 increase in local government expenses required an 8% increase in local taxes in 1985 and a projected increase of 15% for 1986;
- the costs of free and reduced-price school lunches rose 35%.

Fulda's experience is not unique, nor is it truly representative of all rural communities. But the economic, social, and governmental difficulties of Fulda are reflective of the plight far too common across rural America.

The Fulda, Minnesota experience is significant for two reasons. One is that Fulda is a good example of how declining farm (or other primary industries) incomes impact severely on rural communities—as farmland values decline, main street spending falls; jobs in the local commercial sector disappear and incomes in that sector decline as well; and the commercial property segment of the local property tax base also declines. This is particularly true for counties like Fulda's that are considered agriculturally dependent since they derive 20% or more of their total labor and proprietary incomes from agriculture.

But Fulda is also important because even though it is considered agriculturally dependent, its prosperity is also tied to other sources of income. Rural economies are more complex and diverse today than they were in the past, and their prosperity is dependent upon new and existing businesses, transfer payments, sound local services, and prudent governance.

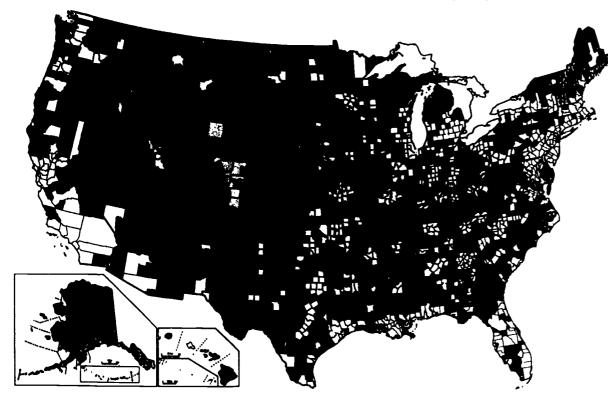
Not only is rural America different from urban America, it is also different within itself. Diversity is one of its hallmarks, a diversity that contains significant social and economic implications. Fulda, Minnesota is neither the exception nor the rule. It is only one rural community like Hibbing and Hartwell and Bucklin where people are trying to earn a living.

While over the past few years the socioeconomic differences between rural and urban areas have diminished as a result of technological advances in communications and transportation, unique differences persist that relate primarily to the fact that people and businesses are more dispersed in rural than in urban areas, creating potential problems in transportation, communications, and provision of community services.

Thus, while only 5.6 million of the over 63 million rural residents live on farms, many of their communities are caught in a similar set of circumstances—declining populations, industries tied to world markets, unemployment and underemployment, business losses, reduced governmental revenues, natural resource and environmental concerns, and lack of control. And their dilemma has ramifications for the rest of the country. As one governor of a predominantly rural state has pointed out: "In the long run, the entire country will be hurt if we don't have a strong agriculture and reinvest in those industries that are found in rural America."



Non-metro counties, 1983



Facts, Challenges, and Opportunities

A survey of the rural American landscape provides a few basic facts from which some definite challenges and opportunities may be derived.

Fact 1: Hard work and the successful manipulation of natural resources do not guarantee economic success

The experiences of Hibbing, Minnesota and Bucklin, Missouri, not to mention those of thousands of rural farm, forestry, mining, fishing, and oil communities, reinforce the fact that control over soil fertility, water availability, and other aspects of farming and natural resource extraction do not translate into economic prosperity In today's depressed agriculture and raw materials markets, the survival of many rural families. especially farm and ranch families, is dependent upon the economic vitality of the rest of the community, in particular the off-farm income that can be generated by jobs in other employment sectors. As the world economy exercises more and more influence over local affairs, rural communities are, in the words of a family-run sawmill operator in LaGrande, Oregon which is exporting lumber products to Japan, "tightening their belts, getting a little smarter, and diversifying their economies."



Challenge: Maintain and enhance competitiveness. Though declining in relative importance for other rural and urban communities, farm and agriculture-related industry still represents an important as oct of the economic well-being of farm-dependent counties. With the slowing of growth in world population, the increase in world food production, and the emerging food exporting capabilities of countries like Brazil, China, and India, it is extremely important for U.S. agriculture to emphasize competitiveness. Within the overall global economic scheme, this includes a major commitment to the continuing efficiency generated by adopting improved technology, in particular biotechnology; adapting systems of integrated management; developing and using new marketing alternatives; and making use of new products in world markets.

Similar attention and effort should be applied to other natural resource based industries such as timber to improve their competitive stance as well.

Challenge: Diversify the economic base. As rural America strives to maintain competitiveness, it must also focus attention on what is to be done with a surplus resources—land, capital, and labor. For those resources that will not be used in food, fiber, and manufacturing production—and for the jobs associated with them—adequate alternatives must be developed. Such alternatives include different types of biomass production, adding value locally, stopping leakages, and developing new industries such as tourism.

The Wisconsin ginseng farmer is a good example of something productive and diversified that can result from different types of biomass production. In New York, Iowa, and Texas, farmers are exploiting the tourist and recreational aspects of their land by instituting bed-and-breakfast accommodations, farm vacations, and hunting for fee.

Since the economic benefit some rural communities gain from agriculture is highly related to the value-added portion contributed by the agricultural sector, rural communities like Fulda, Minnesota and Bucklin, Missouri must devise new ways to add value locally. They can look to experiences like those of Wisconsin farmers who developed a specialty veal for marketing to New York and Miami restaurants. In little more than ten years, the specialty veal industry has added processing plants, feed mills, and jobs to several rural Wisconsin communities.

For other rural communities, like Hartwell, Georgia and Portage, Wisconsin, economic diversification was achieved by developing the tourist industry and revitalizing the downtown. The Portage city council, for example, has already spent over \$300,000 to revitalize the downtown area and is taking additional steps to improve streets and parking in order to encourage downtown business development and to reduce the leakage of dollars to other retail centers.

Challenge: Assist families and youth during the transition. For many farm families, the inability to earn a living by tilling the soil comes as a shocking reality. Many states and local communities are establishing programs in stress management, financial management, home-based business development, and non-farm job training to help ease the transition for farm families. For example, Nebraska's Farmers-in-Transition pro-

gram provides on-the-job training, classroom education, work experience, and youth programs to farmers and their families who have been forced out of farming or are struggling to survive.

Of particular imposance are those programs designed for rural youth who are having a difficult time adjusting to a new rural context which may make it impossible for them to farm on a full-time basis.



Fact 2: Control over local destiny has been diminished

From "the Hilltowns" region of western Massachusetts to the sawmills of LaGrande, Oregon, many rural communities are seeing decisions about their social, political, and economic future being made in Tokyo, Vienna, Washington, or the nearest large metropolitan center. Not only is it vital for rural leaders to understand the dynamics of today's decision-making, but they also must learn to use these new dynamics to their own advantage. Rural America's survival is dependent, in part, on the enlightened perspective of local leaders who are currently shaping the future of their communities.

Challenge: Understand the locus of external decisions. More and more rural leaders have come to recognize the fact that because of linkages with various state and federal agencies, there has been an increasing separation among institutions at the local level. Schools, for example, relate to one set of external agencies, hospitals to another, county governments to another, and so on. Thus, not only are forces outside the community exercising influence and making decisions, but there has also developed a growing lack of cooperation and collaboration among community service providers. The most pressing challenge for today's rural leaders is to confront the forces of separation without losing contact with their local citizenry.

Challenge: Substitute different institutional arrangements. In response to the changing locus of decision making, many rural communities have created new institutional arrangements and networks. The residents of "the Hilltowns," a nine-town rural area of western Massachusetts, banded together in 1980 to form the Hilltowns Community Development Corporation to develop local businesses, provide technical assistance, and to channel the variety of federal, state, and local resources. Since 1980, nearly 180 local businesses have received assistance.

In addition, scores of local rural governments throughout the United States have adopted cut-back management techniques and privatization strategies as potential cost saving methods. By banding together with other jurisdictions to deliver services more efficiently and allowing private firms to provide certain other services, many rural governments have been able to increase their efficiency and stretch their reduced revenues.

Challenge: Build the capacity of local decision makers. The LaGrande sawmill operator's comment about rural industries "getting a little smarter" is at the heart of the present decision-making challenge. Similarly, the residents of Hartwell, Georgia are becoming more adept at planning, obtaining, and utilizing information.

Expanding the capacity of all local decision makers—public officials, local entrepreneurs, and community leaders—relates to their ability to understand and appreciate the value of information, where they can get information that applies to their individual situation, and how to best utilize that information.

On the financial side, communities in Massachusetts, Wisconsin, Oklahoma, and other states are using computerized information and data to assess and improve their financial situations. Through locally targeted analyses, over 20 Massachusetts communities now have a better understanding of their financial situation and what is needed for improvement; 50 Wisconsin communities have undertaken an extensive community economic analysis; and more than 60 Oklahoma community service budgets have been analyzed to provide community residents with maximum quality services within their budgets.



Fact 3: Service demands on local governments are growing as revenues diminish

The dilemma facing Fulda, Minnesota sums up this present day paradox—with revenues being squeezed at the federal, state, and local levels and as local service demands and responsibilities increase, do local officials seek other revenue sources or lower the quality of schools and other local services? Thus far, Fulda has opted to maintain its current service levels, but it has seemingly stretched its taxing capacity as far as it can.

Challenge: Explore all available avenues of potential savings. Cutback management techniques and privatization strategies are two ways for communities to realize potential expenditure savings. In addition, infrastructure adjustments such as service reductions (including permanent road closings and a two-tiered road maintenance system) on rural roads are another. The need for rural communities to maintain many miles of relatively infrequently traveled roads with only a small population base to finance them is just one of the many infrastructure issues confronting rural governments.

Challenge: Seek new ways to deliver services. Recently, two rural Wisconsin communities merged their ambulance services, several Washington communities hired a private company to handle local waste disposal, and three New England counties developed a cooperative arrangement for the maintenance of rural roads. This trend toward functional consolidation and privatization is enabling many rural communities to cope with reduced revenues and increasing service demands. There is an obvious need for a much more effective sharing of experiences among local overnments.

Challenge: Develop alternative revenue sources. Fulda didn't just view the property tax as a way to make up for its revenue losses. Local officials there considered imposing a local retail tax as well. Two Wisconsin counties recently installed a county sales tax, and scores of communities across the U.S. are experimenting with wheel tax options. While local taxing authority differs among the states, many rural communities are weighing new taxes, user fees, and intergovernmental transfers as possible sources for much-needed revenue while others opt for service reductions. In the end, it is the residents who decide which option to pursue.

Challenge: Encourage public sector entrepreneurs. What happened in Hibbing's private sector with the chopsticks factory can happen in the public sector of many rural communities as well. In order for this to take place, however, rural governments need to develop a production, marketing, and finance system that encourages and rewards risk taking, innovation, and initiative. In short, rural America needs more public sector entrepreneurs to assist with the delivery of the health, transportation, education, environmental, energy, and other services it provides its residents.



Fact 4: Rural areas are more dependent on volunteer leadership

A large number of volunteers are among the over 300,000 elected officials who manage the affairs of the country's 54,000 units of local government (county, town, school and special districts). As a result, many of them do not have the time nor the resources to keep abreast of the new developments and the many technical specifics necessary to the operation of today's complex institutions of government. Other rural communities are disadvantaged because their local employees often are unable to keep pace with a rapidly-changing technology, causing their community to lose its competitive edge on business development.

A recent survey of officials in rural Ohio counties revealed that small-community officials are not well linked to the public management networks, professional associations, and government agencies that exist to serve them. The survey agreed with an assessment by the Office of Management and Budget which said: "It is really the problem of getting the horse to drink that needs attention, not the problem of finding the water in the first place, or building bigger reservoirs."

Challenge: Improve support for community leaders. Education and technical assistance are critical for expanding the effectiveness of local officials, helping them to perform their tasks and cope with community needs. The availability and application of information for local decision making is also critical. Publications that deal with local government issues are valuable resources to improve the quality of local government. Additionally, membership and participation in professional and governmental organizations offer opportunities to share and learn.

Challenge: Provide continuing education for rural leaders. A city clerk with the small Illinois community of Colchester is learning how to respond to changes that affect her public role and her community through a series of educational programs aimed at municipal clerks in small communities. Co-sponsored by the University of Illinois Cooperative Extension System and the Continuing Education Offices of five central Illinois community colleges, the educational programs are convenient, inexpensive, and tailored to the specific needs of each group. Thus far, over 50% of the officials participating in the Illinois program are from communities with populations of less than 2,500.

"I've been at my job almost twelve years," explains the clerk, "and I've been able to grow with it since I didn't have any prior training to be a municipal clerk. But I feel sorry for anybody that would have to take it over now—there are so many more requirements than there were twelve years ago." Rural leaders' dilemma can be partially resolved by continuing education efforts like the one in Illinois.

Fact 5: Human and financial capital are flowing out of many rural areas

Due to the farm financial crisis, sluggish export markets, and falling energy prices, many rural financial institutions are experiencing severe fiscal stress. There were more bank failures in 1985—124—than in any year since the Great Depression, with about two-thirds of the bank failures in rural areas, especially farm areas. Nevertheless, despite the uncertainty of the effect of deregulation of the financial services industry upon rural banking systems, experts conclude that financial services to most rural communities do not appear to be immediately threatened.

Still, many rural communities direct an inordinate amount of attention to the specific nature of their financial links to regional and national capital markets. What these communities should be doing is creating investment opportunities through broad-based economic development strategies. In this way, rural areas will be better able to both retain existing capital and attract new financial capital.

But when difficult access to financial capital is combined with the loss in rural areas of human capital—the reduction of in-migration and the increase in unemployment and underemployment—the task of revitalizing rural America becomes an even greater challenge. If local leaders can identify and stimulate those industries that have the greatest economic potential in their areas, they can reverse the loss of human capital.



Challenge: Create investment and entrepreneurial opportunities. As Hartwell and Hibbing and Portage have shown, there are opportunities for generating investments in rural communities. More local communities are looking to the information/service sectors as investment generators, bringing diversity to their traditional economic development strategy of luring goods-producing industries to their areas. And many rural communities are developing entrepreneurial support systems, incubator programs, and other measures to spur entrepreneurial activity.

New products and new concepts generate new wealth, and they can result from the retention and expansion of already existing businesses as well as from new business formations. Whatever the strategy, it is critical that rural communities do not allow all these new dollars to escape. In addition to developing export businesses, rural communities can effectively reduce the leakage of dollars by creating investment and entrepreneurial opportunities that translate into goods and services suitable for the local economy.

Challenge: Increase off-farm employment opportunities. The generation of off-farm sources of income is a critical ingredient in the development of an effective rural economy where there are large numbers of farms. These sources include employment in service-producing industries and manufacturing and income from transfer payments, dividends, interest, and rent.

The proportion of total U.S. farm family income earned from off-farm sources has increased steadily during the past two decades (see chart 5). While the transition to a more diversified economy in some rural communities is made difficult by their small population, their distance from most major urban markets, and their history of population decline, it is important to note that

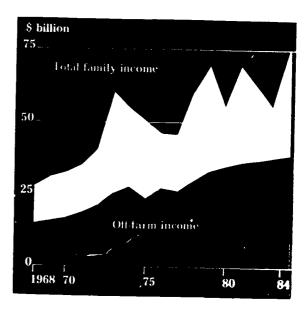
the economic stress stemming from problems in agriculture can be offset by off-farm employment.

Rural initiatives in Portage, Wisconsin and Hartwell, Georgia that generate local employment in areas like manufacturing and service-producing industries and innovative efforts like Nebraska's Farmers-in-Transition program can expand off-farm employment opportunities as well as help to train farm family members for other types of work. By identifying and stimulating those industries that offer the greatest opportunity for economic growth in rural areas, rural residents can have a direct and personal impact upon the economic stability of their community.

Challenge: Empower rural leaders. Of the 39,000 general purpose local governments in the United States (cities, towns, and counties), 73% have populations of less than 2500 and most of them are run by volunteer leaders. These rural communities must begin to work now on stopping the loss of human capital. One way to do this is by developing new and innovative leaders who can empower rural people to effect rural revitalization.

By eliminating maintenance management in favor of leadership with vision, viewing change as inevitable and as a situation filled with unlimited possibilities for positive responses, and fostering an internal organizational environment that encourages creativity and honest communications, rural leaders can take the lead in empowering individuals to bring about community change.

Chart 5. Income of farm operator families

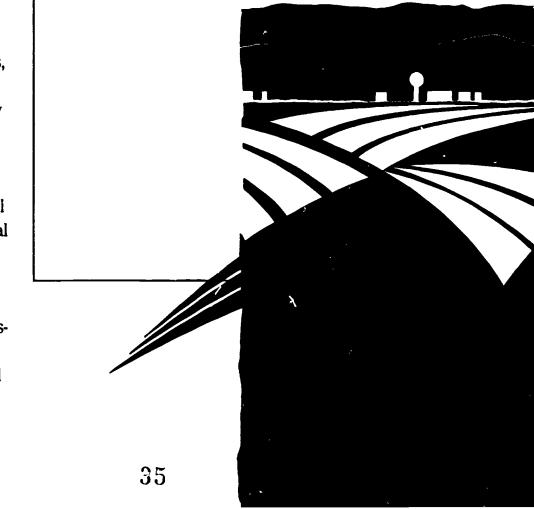


Source, 1985 Agricultural Chartbook, USDA 1986



Extension's Response to a Changed Rural America

Rural America is at a critical juncture. There is an urgent need to help farmers, loggers, miners, timber operators, fishers, ranchers. business managers, families, and public leaders make the necessary adjustments to function efficiently in a new world environment. If a revitalized rural sector is going to be a part of a new America, it will require a concerted effort on several fronts, including an educational initiative that provides the perspective, knowledge, skills, and decision-making environment necessary to bring this about. One organization that has the potential to meet a major portion of this educational challenge is the Cooperative Extension System.



What is Extension?

Created by Congress in 1914 through the Smith-Lever Act, the Cooperative Extension System has its origin in the confluence of two historical factors: 1) the social and economic needs of rural America; and 2) the political demands of a largely agrarian society for an informed, vigorous people.

For over seven decades, the Cooperative Extension System has maintained a strong, long-standing commitment to rural America and its people. With its educational programs based on the research and knowledge provided by the land grant colleges and universities and the USDA, Extension is unique among educational institutions. And as part of a nationwide partnership that functions at the local, county, state, and national levels, it has proven that it can make a difference.

In addition, Extension helps people apply these research findings to everyday problems. Since it involves citizens in identifying needs and establishing priorities, Cooperative Extension System programs are responsive to local issues and interests.

Why is Extension best able to respond to the rural challenge?

Accessibility

The Cooperative Extension System includes professional staff in nearly all of the nation's 3,150 counties, in each of the 1862 land-grant universities (in the 50 states, Puerto Rico, the Virgin Islands, Guam, American Samoa, Micronesia, and the District of Columbia), and in the sixteen 1890 land-grant universities and Tuskegee University.

Research base

Extension leads the nation in teaching the adaptation and transfer of science and technology Through its linkages with Land Grant. Sea Grant, and other research and resource bases, as well as the \$2 billion annual federal investment in agriculture, forestry, human nutrition, and social science research, Extension accesses, adapts, and transfers research findings to the country's agricultural producers and rural businesses, families, and communities.

Experience in dealing with change

Through communications with individuals, organizations, businesses, researchers, advisory panels, and policy makers at the national, state, and county level, the Cooperative Extension System provides constant insight and exposure to emerging issues as well as providing an "early alert" system for identifying pending issues from throughout the nation. Since 1914, Extension has been a means to legitimize change as it has he'ped rural Americans adapt to changes in communications, technology, human health and nutrition, soil and water conservation and management, and a variety of other transitions.

Ability to respond to diverse local needs

With its broad-based multi-disciplinary professional staff, Extension evaluates and adapts the results of research and technology from across the nation and throughout the world and appropriately tailors it to specific local conditions.

ERIC Full Text Provided by ERIC

Extension provides the framework and support necessary for all Americans, especially rural Americans, to access and apply public-generated and public-held research results where they live and work. Rather than working in isolation, Extension works in tandem with a host of educational, research, governmental, business, and public and private organizations to respond to the different needs of different communities. Linkages include those with institutions such as local chambers of commerce, state departments of development, the Farmers Home Administration, vocational-technical schools, and many others.

Flexibility

By adapting research and knowledge and applying it where people live and work, Extension education is indeed flexible. Whether instruction is simply a response to a one-question phone call or involves months of work with citizens on a community-wide problem, the relevancy and flexibility of the teaching, and of the research upon which it is based, are paramount.

Extension's integrated response to rural revitalization

Perceiving the necessity for a bold, innovative, and active response to the complexities of rural revitalization and recognizing the need to focus its resources on the most significant aspects, the Cooperative Extension System offers a model which shows that rural revitalization may be understood as the interaction of economic (E), institutional (I), and cultural (C) factors that are driven by technology (see illustration below).

Economics (E) refers to the components of production, employment, income effects, and marketing whose fundamental changes have been pointed out by Drucker and others. Institutions (I) relate to the structures and processes by which decision making occurs and responsive programs are developed; the institutions involved include families, communities, governmental jurisdictions, businesses, and social service systems. Culture (C) refers to the basic values and aspirations that determine the choices made by people and institutions. And technology (t), including both hardware (mechanics) and software (decisions) capacities, represents the effects of knowledge, innovation, and information as it drives the interaction of the other three variables.

$$\mathbf{RR} \stackrel{\triangle}{=} f(\mathbf{E} * \mathbf{I} * \mathbf{C})^{\mathsf{t}}$$



The fundamental elements of Extension's contribution to rural revitalization

Four fundamental elements are associated with Extension's role in the area of revitalizing rural America. These are:

- 1. Providing a perspective on local development issues: Education is needed to examine and explain the larger contexts (regional, national, or global) of local decisions and assist those involved in the decision making to ask the right questions and to find the right answers.
- 2. Increasing the knowledge base for individual and community decisions: Education increases the knowledge of rural decision makers through the application of social and physical science research to community and individual problems, the interpretation of information, and the development of the analytical skills necessary for local officials to better analyze local options and impacts.
- 3. Developing the skills necessary to achieve individual and community goals: Education and training in areas such as problem awareness, local information use, leadership, public decision making, and involvement of diverse interests can help citizens to improve the community leadership skills they need to translate community decisions into effective action.
- 4. Helping to shape the decision-making environment: As a source of innovative institutional ideas and a conduit for the analysis which shapes the design of new institutional arrangements, education assists communities with the design of institutions that define local priorities and determine the outcomes of rural revitalization efforts.

The dynamics of rural revitalization education

The challenge for Extension is to put education to work in revitalizing rural America. As shown in Figure 1 (see page 25), the fusion of Extension's rural revitalization model with the four fundamental elements of its rural revitalization role bursts forth with a number of major implications for revitalizing rural America. In brief, the major impact areas include:

Economic development

Extension has outlined five general strategies that rural communities can follow to expand local employment and income:

- 1. Improve the efficiency of existing businesses;
- 2. Increase new business formations;
- 3. Capture new dollars from both inside and outside the community;
- 4. Attract new basic industry/employers;
- 5. Capture financial aids from broader levels of government.

Portage, Wisconsin (mentioned above) and over fifty other Wisconsin communities have benefited from the application of these community economic development strategies during the past four years. Positive rural Wisconsin outcomes include new businesses; tourism expansion; business formation support; community development block grants; retention of retirees in the community; and capital improvement projects.

Likewise, rural economic development efforts spearheaded by Cooperative Extension in Farmington, New Hampshire, Hartwell, Georgia, and throughout the U.S. have had similar positive results.

The five strategies are not mutually exclusive, and a large amount of interaction is likely. In addition, Extension staff are working one-on-one with many rural families, helping some to improve their family financial management skills and others to develop viable businesses. Moreover, Extension efforts in improving the production and efficiency of existing businesses in U.S. agriculture have had a major impact on both rural and non-rural economic development. The combination of all these efforts presents a wide range of policy initiatives, and each strategy lends itself to Extension education programs and initiatives

Institution building

There are a number of specific strategies Extension can utilize in its ongoing institution building efforts with rural communities:

- 1. Build networks among local, state, regional, and federal organizations;
- 2. Improve fiscal and operational management (public and private);
- 3. Increase understanding of policy alternatives and their implementation;
- 4. Support rural leaders with information, training, and education.

From the Illinois Cooperative Extension Service's efforts with clerks in small cities to the South Carolina Cooperative Extension Service's application of microcomputers to the problems of rural government, Extension is helping rura! institutions to evolve, adapt, interact, and endure.



Cultural change

Perceived nationally and internationally as the agency to assist communities and individuals in changing as well as adapting to change, the Cooperative Extension System contributes in a variety of ways, among them:

- 1. Helping rural families in dealing with economic and social changes;
- 2. Understanding and interpreting trends that shape strategic local decisions;
- 3. Assisting with problem solving and public policy decisions;
- 4. Building the leadership capacity to plan for the future.

For better than seven decades, Extension has developed programs that address the pressure points in American society. Extension education efforts with individuals and communities in New Hampshire, Colorado, Wisconsin, Oklahoma, and the rest of the nation are helining rural communities, especially those with ramilies experiencing a great deal of stress, to adapt to a rapidly changing culture.

Technology

Continually stimulating the interaction of economic development, institution building, and cultural change, technology is the explosive force in rural revitalization. The Cooperative Extension System leads the nation in teaching the adaptation and transfer of science and technology, and the significance of technology in revitalizing rural America necessitates that Extension maintain this commitment.

Whether in its programs in Texas and Michigan on local government computerization or by the adaptation of applied agricultural research on the farms and ranches of Iewa and Colorado, Extension education is responsive to technology and is effective in assisting with its adaptation.

A viable partnership

The Cooperative Extension System can play a role in revitalizing rural America. Key to Extension's effectiveness are its federal/state/local partnership, its linkages and collaboration with a variety of other influential institutions and organizations, and its long-standing commitment to rural Americans. Such an effort will require new resources. But by generating the same type of commitment to revitalizing rural America as it did to increasing agricultural efficiency, the Cooperative Extension System can help rural America realize its potential.



Dynamics of rural revitalization education

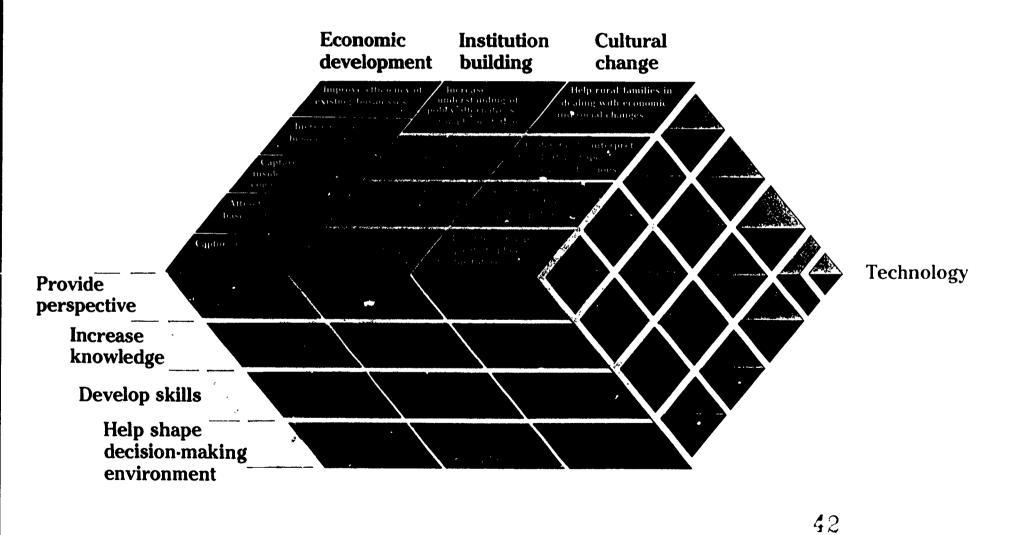
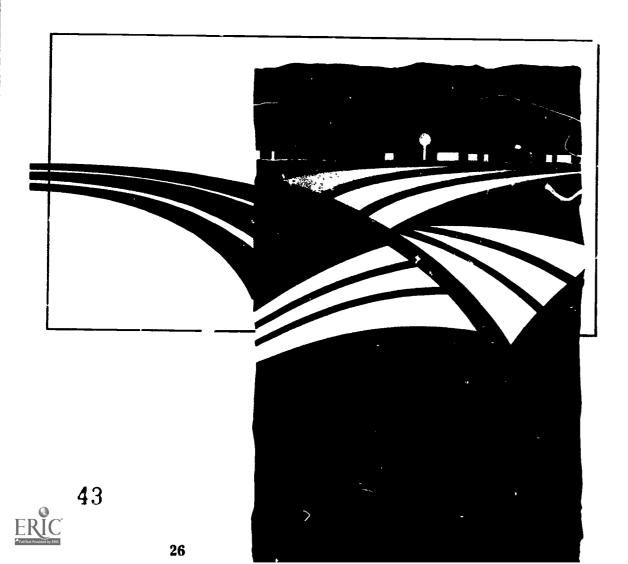




Figure 1.

A Challenge to Americans



Rural America is home to one in every four Americans, three out of every four units of government, and is charged with the stewardship of nearly 90% of the nation's natural resources. If the revitalization of rural America is to occur, it will require the leadership, understanding, cooperation, and creativity of all Americans.

Seventy years ago, a largely agrarian America stood on the brink of major technological changes in the farming industry, changes that would alter the nature of work in this country and which would provide all Americans with significant economic, personal, and social benefits.

A Challenge to Americans

Today, rural America is on the verge of a similar epoch, only this time the driving economic and social forces have global causes and implications. In both instances the Cooperative Extension System is playing a vital role.

Because of the support provided by the American people, Extension has been committing personnel and resources to agricultural progress and profitability since 1914. If Extension is to have as large an impact on revitalizing rural America, it will require a similar dedication of personnel and resources.

Though large and complex, the task of revitalizing rural America constitutes a collective response on the part of the Cooperative Extension System. In particular, several Extension national priority initiatives comprise this integrated response, and these include:

- competitiveness and profitability of agriculture;
- increasing family economic and emotional stability;
- water quality;
- alternative agricultural opportunities;
- improving nutrition, diet, and health;
- building and developing human capital;
- conservation and management of natural resources.

Yet revitalizing rural America is more than the mere combination of these and other program priorities. It is a challenge that requires an integrated and coordinated effort both within the Cooperative Extension System as well as among the other institutions, organizations, and individials collaborating with Extension in rural revitalization. Further, the challenge necessitates that the Cooperative Extension System apply the

new and different knowledge and research bases of the universities to the changing needs of rural individuals and communities better than it has been able to do with its current resources.

Thus, new financial resources will be needed for an effective and visible educational contribution to rural revitalization. But equally important, human resources and the commitment of all Americans will be required as well.

There is an organization that is in touch with rural America, that can access the knowledge and research of our society and apply it to local concerns, and that can serve as a model for leading the rural revitalization effort. With the support of the American people, the Cooperative Extension System will respond in diverse and significant ways to a changed rural America.



References

Lloyd D. Bender, et al. The Diverse Social and Economic Struct, re of Nonmetropolitan America. Rural Development Research Report No. 49. Washington, D.C.: USDA, Economic Research Service, 1985.

Donald A. Dillman, "Social Issues Impacting Agriculture and Rural Areas as We Approach the 21st Century," in *New Dimensions in Rural Policy: Building Upon Our Heritage* (see below).

Peter F. Drucker, "The Changed World Economy," Foreign Affairs, Vol. 64, No. 4. Spring, 1986, pp. 768–791.

Governing the Heartland: Can Rural Communities Survive the Farm Crisis? Prepared by the Subcommittee on Intergovernmental Relations of the Committee on Governmental Affairs, United States Senate, May 1986.

Peter F. Korsching and Judith Gildner, editors. Interdependencies of Agriculture and Rural Communities in the Twenty-First Century: The North Central Region. The North Central Regional Center for Rural Development, 1986.

New Dimensions in Rural Policy: Building Up Our Heritage. Studies prepared for the use of Subcommittee on Agriculture and Transports of the Joint Economic Committee, Congress of the United States, 99th Congress, 2nd Session June 5, 1986.

Glen C. Pulver, "Economic Growth in Rural America," in *New Dimensions in Rural Policy Building Upon Our Heritage* (see above).

Regaining Farm Profitability in America: A Coerative Extension System Response. Prepared the Extension Committee on Organization and Policy, December 1984.

Shadows in the Sunbelt: Developing the Rural South in an Era of Economic Change A Report of the MDC Panel on Rural Economic Development, May 1986.

Technology, Public Policy, and the Changing Structure of American Agriculture: A Special Report for the 1985 Farm Bill. Washington, D Office of Technology Assessment, Congress of the United States, March 1985.



Task Force

Charles F. Koval, Deam, Cooperative Extension Service, University of Wisconsin-Extension; John A. Vance, Deputy Administrator, ES-USDA; Ayse Somersan (co-chair), State Program Leader, Community, Natural Resource, and Economic Development, University of Wisconsin-Extension; W. Robert Lovan(co-chair), National Program Leader, Leadership Development and Community Decision-Making, ES-US)A; Doug Bachtel, Extension Rural Sociologist, Cooperative Extension Service, University of Georgia; R.J. Hildreth, Managing Director, Farm Foundation, Oakbrook, Illinois: Carroll Howes, Associate 4-H Program Leader, Cooperative Extension Service, Pernsylvania State University; Dalton McAfee, Assistant Administrator, Agricultural Extension Service, Greensboro, North Carolina; George McDowell, Associate Professor and Extension Economist, Department of Agricultural and Resource Economics, University of Massachusetts; Bonnie McGee, Home Economics Program Leader, Cooperative Extension Service, University of New Hampshire; Shirley H. Phillips, Associate Director, Cooperative Extension Service, University of Kentucky; Kenneth Pigg, Associate Dean, College of Public and Community Service, University of Missouri-Columbia; Richard J. Sauer, Vice President, Institute of Agriculture, Forestry, and Home Economics, University of Minnesota; Michael S. Turner, Professor, Department of Agricultural Economics, University of Nebraska; Bruce Weber, Professor and Extension Economist, Department of Agricultural and Resource Economics, Oregon State University; Russ Youmans, Director, Western Rural Development Center, Oregon State University.

Credits

Produced by: Division of Cooperative Extension, University of Wisconsin-Extension

Writer: Doug Bradley, Assistant to the Chancellor, University of Wisconsin-Extension

Design: Paul Fuchs Design; Madison, Wisconsin

Printing: Litho Productions; Madison, Wisconsin